## REMARKS

After entry of this Amendment, claims 113, 117-120, 125, 129-131, 133-135, 137-139, 141-144, 170-174, 180-182, 187, 190-193, 195, 197-204, 206-209, 236-237, 239, 241-244, 247-250, 251 and 254-278 will be pending in this application. Claims 243-244 and 247-250 are currently withdrawn from consideration.

Applicants have amended claims 113, 125, 131, 133, 134, 135, 141, 170, 174, 187, 190, 193, 195, 197, 201, 206, 236, 237, 239, 247-250, 254-258, 260-262, 264-266, 268-270 and 272-273 to improve their form. Applicants respectfully submit that these amendments do not add new matter to the specification.

In addition, Applicants have amended claims 254-257 to recite the administration of a 2 mg dose of the antibody or antigen binding fragment thereof to a human host. Support for this amendment can be found in Example 17.

Applicants have added claims 274-278. Applicants respectfully submit that claims 274-278 do not add new matter to the specification. Support for the antigens recited in these claims can be found in US2002/0048586 (published application), ¶118.

***Rejection Under 35 U.S.C. §102***

Claims 113, 117-120, 123, 131-135, 137-139, 141-144, 170-174, 180-182, 185, 190, 193, 195, 197-204, 206-209, 235-239, 241-242, 251, 260-261, 264-265, 268-269, 272-273 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 5,532,159 ("*Webb*"). The Examiner states that the rejection over *Webb* is maintained for the reasons of record. The Examiner bases this rejection on a theory of inherent anticipation. The Examiner states that both the claimed invention and the prior art teach the administration of antibodies specific to a soluble tumor associated antigen for the purposes of treating cancer. According to the Examiner, even though *Webb* does not disclose the elicitation of a T-cell or humoral immune response, this would be an inherent property of the antibodies used in the method disclosed by *Webb*. The Examiner concludes that "[t]he mechanism of action does not have a bearing on the patentability of the invention if the invention was already known or obvious."

Applicants continue to traverse the Examiner's rejection. The Examiner points out that "[t]he mechanism of action does not have a bearing on the patentability of the invention ***if the invention was already known or obvious***" (emphasis added). In this case the claimed invention was not known or obvious. The claimed invention requires a method comprising administering an antibody (or antigen binding fragment thereof) that specifically binds to an epitope on a multi-epitopic antigen present in the host serum, whereby the antibody forms an immune complex with the antigen in the immune complex, and ***whereby an effective host T cell and/or humoral immune response is elicited against the antigen in the immune complex***. This was not already known in the art. As discussed in detail in the attached Declaration Under 37 C.F.R. §1.132 (hereinafter "Declaration"), there is absolutely no evidence that the antibody disclosed in *Webb* elicits an effective host T cell or humoral immune response against the antigen to which it binds. In fact, the evidence indicates that it does not. *See* Declaration, ¶¶ 6-10. Accordingly, *Webb* fails to disclose (either expressly or inherently) the use of an antibody which meets all of the limitations in the pending claims, and cannot anticipate the pending claims. *See Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987) ("A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.")

In order to prove that an element is "inherent" in the prior art, "the evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference." *See id.* When relying on a theory of inherency, "the examiner must provide evidence that the allegedly inherent characteristic ***necessarily*** flows from the teachings of the prior art." MPEP § 2112 (emphasis in original) (citing to *Ex parte Levy*, 17 USPQ2d 1462, 1464 (Bd. Pat. App. & Inter. 1990)). Contrary to the Examiner's apparent position, not all antibodies elicit an effective host T cell or humoral immune response against the antigen to which they bind. Applicants respectfully submit that the Examiner has not provided the required evidence to demonstrate that the antibodies used by *Webb* would inherently elicit an effective host T cell or humoral immune response against the antigen in an immune complex as required by the claims of the cited application. In fact all of the evidence indicates that the anti-OFP antibodies used by *Webb* did not elicit an effective host T cell or humoral immune response against the OFP antigen. *See* Declaration, ¶¶ 6-10. Thus, Applicants respectfully submit that the claims are not inherently anticipated by *Webb*.

The Examiner points out that Applicants' own specification suggests that the claimed mechanism of the invention is *not* bound by a particular theory of operability. Applicants note that while the specification states Applicants do not wish to be bound by a particular theory of operability, the pending claims are limited to the use of antibodies which form a complex with the antigen and elicit an immune response against the antigen in the immune complex.

In view of the arguments presented above, Applicants respectfully request that the Examiner reconsider and withdraw the novelty rejection over *Webb*.

***Rejection Under 35 U.S.C. §103***

The Examiner has rejected claims 113, 117-120, 123, 125, 129-135, 137-139, 141-144, 170-174, 180-182, 185, 187, 190-195, 197-204, 206-209, 235-239, 241-242, 251, 254-259, 262-263, 266-267 and 270-271 under 35 U.S.C. §103(a) as allegedly unpatentable over Baum et al. (Hybridoma 12(5):583-589 (1993)) ("*Baum*") or Madiyalakan et al. (Hybridoma 14(2): (1995)) ("*Madiyalakan*") in view of *Webb* for the reasons of record.

Applicants traverse. The teachings of *Webb* are discussed above. *Baum* and *Madiyalakan* disclose the administration of radiolabeled monoclonal anti-CA125 antibodies to ovarian cancer patients for the purposes of locating tumors or their metastases. *See Baum*, page 583; *Madiyalakan*, page 200. Nothing in *Baum* or *Madiyalakan* demonstrates that non-radiolabeled anti-CA125 antibodies would have a therapeutic effect. The anti-CA125 antibodies were not administered as therapeutic agents and the patients receiving the antibodies were most likely receiving additional cancer therapies. (*See, e.g., Baum*, page 584, states that all patients had recurrent disease and in most cases had received first or second line chemotherapy.) Further, both publications are based on the retrospective analysis of data and caution against making conclusions based on the disclosed information.

*Webb* does not disclose or suggest the use of antibodies which bind to antigens other than OFP; *Baum* or *Madiyalakan* do not disclose or suggest the use of antibodies which bind to antigens other than CA125. None of the references discloses or suggests that its teachings could be extrapolated to other antibodies and other antigens. Accordingly, there would have been no motivation to combine the teachings of *Webb* with the teachings of *Baum* and *Madiyalakan*.

Further, as discussed above, *Webb* states that the disclosed anti-OFP antibodies exert their therapeutic effect by removing OFP, an immunosuppressive antigen, from the circulation. Based on this disclosure, a person of skill in the art would not have applied the teachings of *Webb* to other antigens, such as CA125, which are not immunosuppressive. Accordingly, for this additional reason, a person of skill in the art would not have been motivated to combine the teachings of *Webb* with the teachings of *Baum* or *Madiyalakan*.

Moreover, even if the references were combined, the combined teachings would not teach or suggest the claimed invention because none of the cited references teaches the use of a non-radiolabeled antibody (or antigen binding fragment thereof) which elicits an effective host T cell or humoral immune response against the antigen to which it binds as required by the pending claims.

In view of the arguments presented above, Applicants respectfully request that the Examiner reconsider and withdraw this obviousness rejection.

***Rejection Under 35 U.S.C. §112, first paragraph***

The Examiner has rejected claims 190, 238, 260, 264, 268, and 272 stating that the claim term "non-human" does not have support in the specification as originally filed and fails to meet the written description requirement. The Examiner states that although Applicants teach the use of a murine antibody which is a non-human antibody, the claims are broadly drawn to a genus of non-human antibodies which is much broader in scope than murine antibodies.

Applicants traverse this rejection. However, in order to expedite prosecution, Applicants have amended the claims to recite an animal antibody. The specification, as originally filed provides support for the use of animal antibodies in the claimed methods. For example, the specification states that the antibodies to be used in the claimed methods may be produced by immunizing ***an animal***. *See* US2002/0048586 (published application), ¶¶102, 105. Although the specification refers to antibodies produced in mice as the typical antibodies (*id.* at ¶102), the specification does not limit the invention to the use of murine antibodies. The specification further states that the "***murine or other animal antibodies***" to be used in the claimed methods may be humanized (*id.* at ¶105; emphasis added). Thus, on its face, the specification discloses

that the antibodies to be used in the claimed method may be produced in any animal, not just in mice. Accordingly, Applicants respectively submit that the amended claims meet the written description requirement.

***Concluding Remarks***

In view of the amendments and arguments made herein, Applicants believe the pending application is in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner believes that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Applicants believe no fee is due with this response, other than the fee for the accompanying Petition for a one month extension of time. However, if an additional fee is due, please charge our Deposit Account No. 18-1945, from which the undersigned is authorized to draw, under Order No. AREX-P03-004.

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Respectfully submitted,

By _____

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